REMARKS

Claims 1-13 are all the claims pending in the application. Applicant adds claims 10-13 to further define the invention as discussed in detail below.

The drawings filed June 21, 2000 are objected to by the Examiner; Applicant amends Figs. 14 and 15 to be designated with the legend --Prior Art-- to overcome this objection as indicated in the attached Request for Approval of Drawing Corrections.

The disclosure is objected to because of informalities. Applicant amends the specification to remove any ambiguities.

Claims 7-9 are rejected under 35 U.S.C. § 102(e) as being anticipated by Bessone et al. (6,132,102).

Claims 1-6 are rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over Bessone et al. (6,132,102).

Analysis

All pending claims are rejected as being either anticipated by, or rendered obvious by, Bessone. The following discussion is initially directed to claims 1 and 6-9 since these are the only claims in independent form.

In Bessone, the pocket surface 21 is a substantially flat face (see column 3, line 4). In addition, Applicant submits that an arc shaped first pocket surface 19, to which the Examiner refers in the Office Action, is merely a tooth (column 3, line 2).

On the other hand, in the present invention, pocket surface 1a of the pocket 1 is formed in an arc-configuration. Thanks to this arc-configuration of the pocket surface 1a, the pocket 1 can relax a stress generated from the contact of the retainer and the rolling element received in the

pocket and improve the lubricating condition (specification, page 9, lines 13-18). Therefore, since Bessone discloses neither an arc-configuration pocket surface nor a use leverage thereof, Applicant respectfully submits the claimed invention, according to claims 1 and 6-9, is patentable.

The remaining rejections are directed to the dependent claims. These claims are patentable for at least the same reasons as the independent claims, by virtue of their dependency therefrom.

In addition, Applicant adds the claims 10-13 which depend from claims 4, 5, 8 and 9, respectively. These claims are directed to the run out preventing portion being no more than the roller effective length e and 0.75 times longer than the roller effective length c.

This subject matter is supported on page 22, lines 16-19 of the specification, which states that "...the length d of the run-out preventing portion 1d is made equal to or less than the roller effective length e even when the former is set at its maximum value, ...".

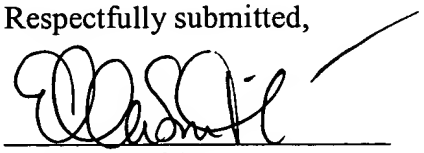
These claims are patentable for at least the same reasons as the independent claims, by virtue of their dependency therefrom.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Page 20, paragraph 2:

This can be confirmed through a simple calculation. To be specific, assuming that the sectional secondary moment is I and that axial ends of a pillar of a retainer which is formed from a material having a modulus of longitudinal elasticity E are supported on free fulcrums, when deformations at the ends of the run-out preventing portions when a certain uniform surface pressure is applied to the run-out preventing portion 1d from the radial direction are obtained for cases where the axial length of the run-out preventing portion is 0.6 times the full length of the pillar in length as shown in Fig. 5A and where the former is 0.9 times the latter in length as shown in Fig. 5C, obtained are [$0.062pL^4/EI$] $\underline{0.0062pL^4/EI}$ and $0.0020pL^4/EI$ as shown in Figs. 5B and 5D, respectively. In other words, as shown in Figs. 5A to 5D, it is indicated that with the same surface pressure being applied, the longer the axial length of the run-out preventing portion becomes, the smaller the pillar deforms at the ends of the run-out preventing portion. Since it was assumed in the above calculations that the roots at the pillar are free fulcrums and that the surface pressure is uniform in the axial direction, although, strictly speaking, the set environment was different form the actual case, the results of the strict calculations indicate that there is a consistent tendency that the longer the axial length of the run-out preventing portion becomes, the smaller the pillar deforms at the ends of the run-out preventing portion. When the roller is

inserted into the pocket, comprehensively speaking, since the engagement margin on the pillar is deformed, to refer to the results of the above calculations in other words, with the same engagement margin, the longer the axial length of the run-out preventing portion becomes, the higher the surface pressure increases.

Page 23, paragraph 1:

Therefore, the axial length of the run-out preventing portion with which the likelihood that the roller 10 is damaged when it is inserted into the pocket is kept as low as possible while the rotating performance thereof is maintained is equal to or [larger] less than the roller effective length e and preferably 0.75 times longer than the roller effective length e. In a case where the axial length of the run-out preventing portion is set at 0.75 times or less the roller effective length e in length, when a retainer and roller assembly comprising a retainer and rollers is installed between races, the rollers are inclined, this making it difficult to so install the retainer and roller assembly. In addition, this leads to a cause for reducing the performance (noise control or the like) of the rollers.

Page 35, paragraph 5:

Note that the 6330 ball bearing is directed to one of bearings which substantially have a dimension based on the International Organization for Standardization (ISO) (for example, the 6330 ball bearing is a single raw deep groove ball bearing having an inner diameter of 150mm).

IN THE CLAIMS:

Claims 10-13 are added as new claims.

IN THE ABSTRACT OF THE DISCLOSURE:

The abstract is changed as follows:

In machining a pocket (1) installing therein a rolling element, tools (7, 8) are prepared whose milling parts (5, 8a) have contours which coincide with the sectional configuration of the pocket resulting when the pocket has been machined along a retainer radial direction (Z), and the milling parts (5, 8a) of the tools (7, 8) are inserted into a prepared hole for the pocket which is provided in advance and are then translated in a retainer revolving direction (Y) and axial direction (X), respectively, for forming the pocket. Accordingly, it is possible to provide a retainer for rolling bearings that has high accuracy in machining pockets and which is suitable for an integral one-piece retainer.